

# WEB PAGE SUPPORT FOR USE OF SLANG TERMS DURING INTERNET SEARCHING IN SEXUAL AND REPRODUCTIVE HEALTH

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This study evaluates the use of slang terms to locate reproductive and sexual health information on the Internet. Many users looking for health information, including adolescents and low literacy populations, may not use technical terms as search terms when searching the Internet. This study aimed to discover the type of sites retrieved using slang terms for condom in English and Spanish.

The slang terms in each language were searched in the Google search engine. The English terms retrieved 3.5 percent relevant sites and the Spanish terms retrieved 19.5 percent relevant sites. Clearly, the reproductive and sexual health sites aiming to provide users with accurate health information are not reaching users that may not have knowledge of technical terms and instead use slang terms to search. These sites should re-evaluate the terms they include in their text and/or metadata in order to serve a more diverse community of users.

Headings:

Contraception – Slang

Internet Searching

Reproductive Health

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## I. INTRODUCTION

In recent years, the Internet has become a widely used tool to find information. Public health professionals and organizations have started to use this tool to disseminate information in a quick and anonymous manner. This is especially true for reproductive health and sexual health information. Many organizations have taken this new opportunity and created lengthy and informative web sites dedicated to spreading accurate information on safe sex and contraception. Some sites are designed with specific audiences in mind, such as adolescents or homosexual communities, while others are general in nature. These sites often provide FAQ's, basic information on contraception, guidelines for practicing safe sex, and some even provide bulletin boards that users can use to post anonymous questions. For a topic such as sex, often seen as an "embarrassing" topic, these web sites are a useful tool for individuals to find information in a comfortable and confidential way.

These sites can be very helpful and hopefully are creating greater awareness of safe sex practices. But how does one locate these sites? Increasingly, individuals are using search engines to locate desired information on the web. For subjects with controlled vocabulary or specific terms, search engines may work well. The topic of sex is somewhat different in that it has a large amount of slang associated with it. Certain users, including adolescents and undereducated populations, may not know the correct, clinical term for the information they need. These users are often considered high-risk populations and the need to reach them with accurate reproductive and sexual information is great. What happens when ones looks for sex information using slang

terms? Are these sex education web sites using slang terms to draw in users of all ages and lifestyles?

While the Internet use is most prevalent in the United States, the rate of Internet use in Latin America continues to grow. The socioeconomic situation in Latin American countries is quite different from the United States, but there is a strong movement to provide computers and Internet access to all levels of the population. The same questions hold true regarding the use of slang in reproductive and sexual health websites in Spanish web pages, especially considering the socioeconomic status of many Latin American citizen. The Internet may be especially important in Latin American countries by providing needed health information in situations where access to health care may be limited.

## **II. LITERATURE REVIEW**

There is no specific literature on the prevalence of slang on the Internet, nor the use of slang terms as search terms. However, there is ample study on the following topics:

1. The use of the Internet to locate health information, including sexual and reproductive health, information.
2. Searching habits of users.
3. The reading level and comprehension of medical terms by various types of populations.
4. The importance and prevalence of slang.

### ***1. The use of Internet to locate health information***

Cline (2001) reviews the literature on health information seeking on the Internet. It is clear that the amount of health information on the Internet is continually growing and that users are seeking out this information. The review reveals that women tend to visit health sites more than men, and blacks tend to rely on the Internet for health information more than whites. The review also points out that there are barriers to access, including language and literacy levels. Many users are overwhelmed by the technical terms found in health information.

Other studies have looked at specific populations and their use of the Internet to locate health information. The Henry J. Kaiser Foundation (2002) conducted a study that concentrated on adolescent's use of the Internet to locate health information. 67.5 percent of all 15-24 year-olds surveyed have used the Internet to find health information, and approximately 40 percent of those have specifically looked for information on sexual health, such as pregnancy, contraception and sexually transmitted diseases. The study determined that the most common way for health seekers to find information was through the use of Internet search engines, with Yahoo and Google being the most popular search engines. Another study conducted by Borzekowski (2001) found that 42.1 percent of students surveyed use the Internet for health topics related to sex, contraception, pregnancy and sexual activity. The same study showed that female adolescents felt it would be worthwhile to have more information on birth control available on the Internet. Although adolescents are using the Internet to find reproductive and sexual health information, many are still frustrated by inability to quickly located accurate and trustworthy information. (Kaiser, 2002, p. 30).

## ***2. Term selection as a searching habit of users***

Studies that have focused on search terms used to find information are usually focused on specific subjects. Fidel (1999) analyzed the searching habits of high school students in response to a homework assignment on horticulture. The study showed the path students took in searching and highlighted some of their frustrations, such as not finding what they are looking for. Because the searching that was analyzed was based on a horticulture homework assignment, there was no possibility of looking at the use of slang in searching for information. Additionally, a study by Moore and St. George (1991) showed that sixth and seventh graders had tremendous difficulty in arriving at search terms. A study by Schacter (1998) elaborated on this study and looked at the searching habits of children (fifth and sixth graders). The study also showed that children have difficulty in forming effective search queries and the majority used full sentence queries. The study also showed that children were generally unsuccessful in locating specific information and were better at retrieving broad information.

Other studies have specifically looked at the searching habits of users looking for sexual health information. Smith (2000) examined the speed at which college students could find sexual health information on the Internet. One of the items that the students were required to look for was “a textual or graphic description of the proper way to put on a condom.” (p. 687). Due to the format of the questions, all the participants used the term “condom” within their search terms. Both of these studies provided users with concrete questions and did not take into consideration the search term development process that users go through.

A study by Bay-Cheng (2001) looked at the values associated with sex education websites. In the methodology, Bay-Cheng searched for sex education web sites by using the terms adolescent, teen, sexuality, education and information. While these terms are useful in locating sex education sites, they do not accurately reflect the terms adolescents or undereducated populations would use. They are too broad and do not reflect specific questions or topics that users may have.

### ***3. Reading levels and comprehension of patients and users***

Researchers have been interested in the differing comprehension levels between providers and clients. One of the most interesting and defining studies was conducted by Ammerman (1992) and shows that most of the adolescents girls surveyed, mostly poor black girls living in San Francisco, had misconceptions on reproductive health vocabulary. 19 percent did not know the meaning of condom and a shocking 44 percent did not know the meaning of sexually transmitted disease. The study also showed that the girls used similar slang terms to identify parts of the body, as opposed to the clinical term. The study suggested that physicians should not assume that adolescents understand the clinical terms used in most office visits and that physicians should try to include slang terms when discussing reproductive and sexual health with patients.

The prevalence of slang related to sexual topics was shown in a study by Edmonson (1975), which looked at sexual knowledge and attitudes of moderately retarded males in rehabilitation programs. The respondents were asked basic questions about sex and sexual activity. They were also asked to identify different parts of the male and female body. In both activities, many of the men used slang to describe sexual



activity and sexual organs. Out of 8 correct answers for identifying male genitalia, 7 of the terms were slang.

Other studies have looked at the understanding levels of sexual behavior terms. Binson (1998) asked study participants if certain sexual behavior terms were easy or difficult to understand. While most respondents felt that the terms were easy to understand, 25 percent of those with less than 12 years of education found the terms difficult to understand.

The literacy level of users can also affect the terms they chose as search terms. Various studies have looked at the literacy level of different populations in relation to health information provided to them. Christensen (1999) studied patients seeking mental health services on self-perceived literacy levels and tested literacy levels. Only 24 percent of the participants reported poor reading ability, but 75 percent of the participants tested at or below a seventh to eighth grade level. The study concluded that health providers should consider the low level of literacy among patients and “use materials prepared at the lowest level of reading difficulty . . . to communicate important information. . .” (Christensen, 1999, p. 263). Another study looked not at the users, but the reading level of information available on the Internet. D’Alessandro (2001) looked at documents relating to pediatric health available on the Internet. This study found that “the readability of patient care information in both print and the WWW are written at too high a level for most adults.” (D’Alessandro, 2001, p. 809). The study urges physicians to express information in a less formal way so that all can understand this important health information. While neither of these studies looked at slang specifically, it can be

inferred that individuals with lower literacy and reading levels may be more accustomed to and comfortable with slang as opposed to technical health terms.

#### ***4. Importance and prevalence of slang in today's culture***

Marketing literature shows a stronger realization that slang is part of today's culture and should be used, rather than ignored. The use of slang in marketing has been on an increase due to advertiser's realization that it speaks to specific audiences. Alcohol advertisers have traditionally used slang to reach audiences, and car manufacturers have followed suit. A recent Oldsmobile advertising campaign used slang terms and phrases to appeal to the 18-24 year old market. A short article in Brandweek urges advertising executives to stay on top of the latest slang because it "can be such a key to communicating with the kids." (Ebencamp, 1998, p. 24). Advertisers know that slang opens doors to communicating and interacting with kids.

Others have shown that slang is more predominate in lower skilled populations. In a study by Thomas C. Cooper (2001) to determine the acceptability of slang use in conversation, he found that younger populations and service and structural occupations were the most accepting of slang use. Of course, the acceptability of slang does not directly translate to a high use of slang, but it does say that slang is a reality for members of the population.

### **III. METHODOLOGY**

In order to determine whether or not the reproductive and sexual health web sites include slang in their pages, I compiled a list of slang terms in English and Spanish for "condom". I chose this word for two reasons. First, I wanted to choose a word that I felt

users would search for. Studies have shown that most condom failure is due to incorrect use of condoms (Martin , 1990). Instructions and guidelines for using a condom are present in almost all reproductive health web sites and it is a good target for what users may be looking for. Secondly, I needed to choose a term that would have a sufficient amount of slang terms related to it. While other terms for forms of contraception could have been used, condom has by far the greatest number of slang terms. The terms were collected from dictionaries, Internet searches and suggestions from colleagues and friends. To ensure that the Spanish slang terms were not specific to a particular country or region, native speakers of Spanish from various countries were questioned. These areas include Mexico, Spain, Argentina, Chile, El Salvador and Uruguay.

Once the slang terms were collected, each term was searched in Google and the first 30 returns were analyzed<sup>1</sup>. Since websites and terms are indexed differently in different languages, the English terms were searched in the English language Google and the Spanish terms were searched in the Spanish Google<sup>2</sup>. The results were analyzed based on the subject matter of the website. Those pertaining to sex were included in the data set, while those pertaining to other subjects related to other meanings of the search terms were discarded. For example, the term “rubber” returned many sites pertaining to rubber products, such as tires. Only sites within the first 30 returns that used the term as a slang term for condom were included in the final data set.

#### **IV. RESULTS**

Table 1 and 2 provide the results from the study. As the numbers show, using slang terms for condom do not retrieve very many relevant websites. In the English set, only one term produced more than 25 percent relevant sites. Many of the terms retrieved

no sites at all. The Spanish terms produced more relevant sites, but the numbers are still low. Two terms returned more than 25 percent relevant sites, but the other terms returned disappointingly few relevant sites.

An interesting factor to point out is that many of the “relevant” sites provided no information on correct use of condoms. Instead, many of the sites were humor sites listing jokes about condoms and the slang use of condoms. These sites were included in the dataset since the term is being used as slang for condom, but the information provided on the website is not related to reproductive and sexual health. This makes the results even more dramatic.

An analysis of presence of metadata tags shows that only 2 of the English sites make use of metadata tags, while 7 of the Spanish sites use metadata tags. These Spanish sites mostly include extensive terms in the Descriptor tag of the metadata. Only one site from the entire dataset included slang in the metadata descriptors – a Spanish-language site contained the term *forro* in the metadata.

Interestingly, *profiláctico* in Spanish retrieved the greatest number of relevant sites (16), while the English equivalent of prophylactic retrieve no sites. While prophylactic is not necessarily a “slang” term in English, it still did not retrieve *any* sites related to contraception.

**Table 1 – English Terms**

<b>Slang Term</b>	<b>Number of relevant sites</b>	<b>Percent of relevant sites</b>	<b>Metadata?</b>
Rubber	2	6%	1
Cap	1	3%	
Jimmy	0	0%	
Raincoat	1	3%	
Life Jacket	0	0%	
Johnson	0	0%	
Prophylactic	0	0%	
Love Glove	8	26%	
Sleeve	0	0%	
Wiener Wrap	1	3%	
Sombrero	0	0%	
Home hood	0	0%	
Umbrella	0	0%	
Protection	2	6%	1

**15/420 = 3.5% of sites were relevant**

**Table 2 – Spanish Terms**

<b>Slang Term</b>	<b>Number of Relevant Sites</b>	<b>Percent of Relevant Sites</b>	<b>Metadata?</b>
<i>Profiláctico</i>	16	53%	3
<i>Forro</i>	4	13%	1
<i>Gorrito</i>	5	17%	1
<i>Globito</i>	11	37%	2
<i>Guante</i>	2	6%	
<i>Cachucha</i>	2	6%	
<i>Traje de buzo</i>	1	3%	

**41/210 – 19.5% of sites were relevant**

## V. DISCUSSION

The data clearly shows that reproductive and sexual health web sites are not considering the use of slang as search terms. A user searching for information on contraception may be quickly frustrated by the lack of relevant information if he/she is using slang terms to search with. Assuming that all users will use technical terms is ignoring the reality of many users.

Information in Spanish is somewhat easier to come by when searching with slang. The creators of the Spanish sites have consciously included slang terms to appeal to a wider audience. This may be due to socioeconomic factors in Latin American countries. The population of many Latin American countries is typically less educated than the population of the United States. According to the United Nations Human Development Report (United Nations 2001), the United States has an adult literacy rate<sup>3</sup> of more than 99 percent, while Latin American countries range from 96 percent in Argentina to 68.1 percent in Guatemala. The authors of reproductive and sexual web sites coming out of Latin America may have taken this into consideration, thus making information more available to more people, especially those in high-risk populations. Many of the sites included in the dataset are based in Argentina. These sites include slang typical of Argentina and general Spanish slang terms. One of the reasons that Argentina is the basis for so many sites may be the level of development of the country. Out of all Spanish speaking Latin American countries, Argentina has the highest level of development (United Nations 2001) and one of the highest numbers of Internet users (3 million)(ITU 2001). Also, many non-governmental organizations focusing on reproductive and sexual health are based in Argentina.

Also, after analyzing the use of metadata, it is clear that the Spanish websites use metadata more frequently than the English websites. It is understandable that some of the smaller web sites dealing with reproductive and sexual health do not use metadata, since the designers may be unaware of the benefits. But Microsoft FrontPage, which prompts users for metadata descriptors, generated many of the pages in the data set.

While some organizations may not wish to use slang in their text, they could still include slang terms in the metadata descriptors. Organizations may feel that the use of slang weakens the authority of a website. If this is the case, the metatags are a perfect place for designers to place slang terms without the terms interfering with the “authority” of a site. Additionally, as cited above, many advertisers use slang to specifically reach and identify with certain sectors of the population. Using slang within the text of the web site may make certain users more comfortable and more willing to read on about safe sex information. A site that contains too many medical terms and a too-formal tone may turn away this same vulnerable population.

The most remarkable result of the study is that the well known, major reproductive and sexual health organizations and websites did not appear in the search results. Groups such as Planned Parenthood, Advocates for Youth, and the web sites Scarleteen and Iwannaknow ([www.iwannaknow.org](http://www.iwannaknow.org)), have extensive information on safe sex and contraception, but include no slang in the text or in the metadata. Since these sites aim to reach a diverse group of users, including adolescents, the use of slang within the text or metadata would greatly aid in its retrieval. The sites use the metadata tags and include extensive terms, but slang terms have been omitted. The Iwannknow metadata descriptors include the following terms:

abstinence, AIDS, adolescence, adolescent health, adolescent sexual health, anal intercourse, anus, bacterial infection, bisexual, blister, cervical cancer, cervix, chancroid, chlamydia, clap, CMV, cold sore, communication, communicable diseases, condom, crabs, cytomegalovirus, discharge, diseases, drip, education, female condom, fever blisters, gay, lesbian, genital herpes, genital infections, genital warts, gonorrhea, hepatitis, hepatitis B, herpes, herpes simplex virus, herpesvirus, HIV, HPV, HSV, human papillomavirus, infectious, intercourse, lesbian, lesion, lice, NGU, nongonococcal urethritis, oral herpes, oral sex, parents, pap smear, pelvic inflammatory disease, penis, PID, pregnancy, pregnancy, prevention, protection, puberty, pubic, risk, safe sex, scabies, sex, sex education, sexual health, sexuality, sexually transmitted diseases, skin infection, STD, STDs, symptom, syphilis, teens, teen health, teen sexual health, teens, teen sex, transmitted, trichomoniasis, vagina, vaginitis, vaginal, VD, venereal disease, viral infection, virus, warts, women's health, yeast infection.

This is an exhaustive list of terms related to safe sex and contraception, and even includes a slang term for a sexually transmitted disease (clap), but it contains no slang terms for contraception. It is also interesting to note the use of medical terms, such as cytomegalovirus. While the authors have consciously thought about various terms to include within the metadata, they have failed to consider special populations that may not have the wide vocabulary presented here.

An argument against the use of slang in websites may be that slang is a transitory type of speech, with different vocabulary emerging and changing all the time. To include slang in a web site, either in text or in metadata tags, would be too time consuming and too difficult to keep up to date. While the fact that most slang is ever changing, there are some words that remain constant over time. It would be nearly impossible to include every slang term for contraception and sex, but including some of the most used and popular terms would indeed aid in attracting more users. Additionally, slang dictionaries are composed yearly and could be reference for new slang terms.



## **VI. CONCLUSION**

The Internet is clearly becoming a more popular place for users to find information on health, especially reproductive and sexual health. The anonymity of the Internet makes it a comfortable and secure place for users to find information on traditionally “embarrassing” subjects. While there are a plethora of informative and helpful sites out there, it is not as easy to find these sites if one is using slang search terms. This creates a problem for special populations who are not familiar with formal or technical terms.

Reproductive and sexual health sites, both in Spanish and English, need to reevaluate the terms they use within their text and within their metadata. Including common slang into the web pages ensures that important reproductive and sexual health information, which can improve the quality of life and health care for individuals, can be made more accessible by simply including slang terms. Without the use of slang, these sites are ignoring the reality of many undereducated users within their populations.

## NOTES

1. Although this study is looking at relevant sites retrieved from a search engine, the point here is not to evaluate the performance of the search engine. Research has shown that search engines can be improved, but for now, it is the only way users have of finding random information. Rather, the aim is to show the lack of slang usage by websites.
2. A small experiment was conducted between the returns of Spanish terms in the English Google versus the Spanish Google. While most of the sites returned were the same, the ranking of the sites was different. Since the study is aimed at determining the returns for a Latin American user, the Spanish Google was used.
3. Adult literacy is defined as those “who can, with understanding, both read and write a short, simple statement on their everyday life.” (United Nations, 2001)

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